

REMARKS

Summary of the Office Action

In the Office Action dated May 7, 2003, the Information Disclosure Statement filed on February 27, 2003 has been considered by the Examiner. The objections to the specification and the rejections of claims 6, 7, 15 and 16 under 35 U.S.C. § 112, second paragraph, set forth in the prior Office Action dated November 29, 2002, have been withdrawn. Claims 1-4, 6-13, and 15-18 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,373,533 to Kawabata et al. (hereinafter "Kawabata") in view of U.S. Patent No. 5,287,418 to Kishida (hereinafter "Kishida"). Claims 5 and 14 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kawabata in view of Kishida and in further view of U.S. Patent No. 5,875,262 to Asada (hereinafter "Asada").

Summary of the Response to the Office Action

Applicant proposes to amend claims 1-2, 10-11 to differently describe the invention and to correct informalities in claims 3-6, 8-9, 12-15 and 17-18, and to add new claims 19-38. Accordingly, claims 1-38 are now pending in this application.

The Rejections under 35 U.S.C. § 103(a)

Claims 1-4, 6-13, and 15-18 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kawabata in view of Kishida. Claims 5 and 14 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kawabata in view of Kishida and in further view of Asada. Applicant proposes to amend claims 1-2, 10-11 to differently describe the invention

and to correct informalities in claims 3-6, 8-9, 12-15 and 17-18. To the extent that these rejections might be reapplied to the amended claims, they are respectfully traversed as follows.

The Office Action asserts at page 3 that gradation and density are comparable terms so that the claim language suggests that only one image processing step has taken place. The Office Action further asserts that the use of the terms to distinguish between two processes would constitute a use of the terms repugnant to their known meanings. Applicant respectfully submits that in Kawabata the tone correction look-up table (LUT) is calculated directly according to a one-step process. The LUT calculation is performed in the histogram correction circuit 3 using the adjustment value c generated by the gain controller 2 which uses the average value of the picture levels of a screen that is detected by the average picture level detection circuit 5. The tone of video signals is corrected using the tone correction LUT thus calculated. In contrast, in the instant invention, the density conversion condition (for example a first LUT for density conversion) is initially determined. Next, the gradation conversion condition (which includes the tone hardening or softening of highlight areas) is determined on the basis of the density conversion condition. Specifically, a second LUT is generated in a second step as the condition for converting the input image data and the input image data is modified using the second LUT.

Applicant submits that the histogram depicted in Fig. 7 of Kawabata has a shape such that the level H of the frequency F (plotted along the ordinate of the histogram in the respective regions of the input video signal level S plotted along the abscissa) changes in accordance with Fig. 3 or 4, thereby changing the shape of the cumulative and normalization function L . The input video signal level S plotted along the abscissa of the histogram does not change in any of regions $S1$, $S2$, $S3$ and $S4$. Thus, Applicant respectfully submits that the density correction based

on the density conversion condition set forth in the instant invention, as recited in independent claims 1, 2, 10 and 11, is not performed by Kawabata.

Specifically, Applicant submits that Kawabata does not teach or suggest the density conversion based on the density conversion condition in accordance with the instant invention, whereby the density of an entire image is converted so that the density of a principal image area (such as a human face) may reach an appropriate brightness. The gradation correction of Kawabata is merely performed so that the contrast of an image area having a specified picture level can be adjusted by raising the gradation of the part of the image that has a large area and a low contrast, in accordance with a cumulative histogram. In contrast, in the instant invention, the density correction based on the density conversion condition is initially performed to reproduce a principal image area (for example a human face) which has a given density with an appropriate brightness. Next, the gradation correction is performed to compensate for the loss in gradation differentiation in highlight areas or the washed-out highlights (highlight clarity) resulting from the density correction, so that the gradation may automatically be adjusted in a non-linear manner on the basis of the result of density correction (based on the density conversion condition).

In light of the foregoing arguments, Applicant respectfully submits that neither Kawabata nor Kishida teaches or suggests at least the features of amended independent claims 1-2 and 10-11 recited above. Accordingly, Applicant respectfully submits that independent claims 1-2 and 10-11, as amended, are patentable over Kawabata in view of Kishida. Moreover, Applicant respectfully submits that claims 3-9 and 12-18 should be allowed at least because of their respective dependence upon allowable claims 1-2 and 10-11. Accordingly, Applicant respectfully requests that the rejection of claims 1-18 under 35 U.S.C. § 103(a) be withdrawn.

New Claims 19-38 are Patentable

Applicant proposes to add new claims 19-38. Applicant respectfully submits that no new matter is being introduced by these claims as they are supported by the recitation in the specification as filed. Applicants respectfully submits that new claims 19-38 are patentable as they recite features of the instant invention neither taught nor suggested by the cited references.

Conclusion

In view of the foregoing, Applicant respectfully requests entry of the amendments to place the application in clear condition for allowance or, in the alternative, in better form for appeal. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative to expedite prosecution.

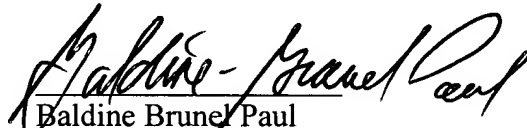
If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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